



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

md

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/869,059      | 11/05/2001  | Ralph Berke          | Q64906              | 1127             |

7590

11/05/2003

Sughrue Mion Zinn  
Macpeak & Seas  
2100 Pennsylvania Avenue NW  
Washington, DC 20037-3213

EXAMINER

THISSELL, JEREMY

ART UNIT PAPER NUMBER

3763

DATE MAILED: 11/05/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/869,059

Applicant(s)

BERKE, RALPH

Examiner

Jeremy T. Thissell

Art Unit

3763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) 8-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 22-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Objections***

Claims 8-21 are objected to under 37 CFR 1.75(c) as being in improper form because multiple dependent claims 8, 9, 10, 12, 13, 16, 17, 18, and 20 are all dependent upon other multiple dependent claims. See MPEP § 608.01(n). Accordingly, claims 8-21 have not been further treated on the merits.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 25 conflicts with claim 24, since claim 24 claims that the flow sensor uses light whereas claim 25 claims that the flow sensor uses sound.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Cornacchia et al (US 5,472,403).

Cornacchia teaches sequential infusion of the fluids from the separate injectors. Col. 7, lines 45-47. Cornacchia also teaches that there is an activation means for causing the syringes to inject. (See Claim 1)

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia in view of Calderon (US 4,867,742).

Cornacchia teaches all the claimed subject matter except for the trigger for the infusion of the flushing liquid being a flow sensor on the other injector. Calderon teaches control of the flow rate using a feedback loop. Calderon at col. 5, ll. 58-65. Since flow sensor are a basic design element, known in the art of medical injection systems, it would have been obvious to one of ordinary skill in the art to use a flow sensor as in Calderon on the injector of Cornacchia, to determine when the injection is complete and initiate the flushing liquid injection.

Claims 22-24, 26-31, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia in view of Yerlikaya et al (US 5,256,155).

Cornacchia teaches all the claimed subject matter except for the trigger for the infusion of the flushing liquid being a flow sensor (specifically an optical sensor) on the other injector. Yerlikaya teaches the well-known use of optical sensors to detect flow in medical tubing. It would have been obvious to one of ordinary skill in the art to use a well-known flow sensor, specifically an optical sensor), as in Yerlikaya, on the device of Cornacchia to detect the completion of the first injection, thus indicating that it is time for and triggering the second injection.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia and Calderon as applied to claim 3 above, and further in view of Yerlikaya.

See discussions above.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia and Calderon as applied to claim 3 above, and further in view of Krivitski et al (US 5,685,989).

Cornacchia as modified by Calderon teaches all the claimed subject matter except for the flow sensor being one that utilizes sound to detect flow. Krivitski teaches the well-known use of sound to detect fluid flow in tubing, specifically medical tubing. It would have been obvious to use any of a number of different flow sensors, including one like Krivitski as an activator for the second injection.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia and Yerlikaya as applied to claim 24 above, and further in view of Krivitski.

See discussions above.

Claims 32 and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia and Yerlikaya as applied to claim 31 above, and further in view of Wilson et al (WO 96/32887).

Cornacchia as modified by Yerlikaya teaches all the claimed subject matter except for the fill valves on the injectors. Wilson teaches an injector that is filled from a reservoir, the connection between the two regulated with a valve. This simple fluid handling configuration would have been obvious to one of ordinary skill in the art as a suitable setup for Cornacchia in order to allow the fluid to be drawn from a reservoir much larger than a single syringe.

Claim 35 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia and Yerlikaya as applied to claim 22 above, and further in view of Wallis (US 5,236,417)

Art Unit: 3763

Cornacchia as modified by Yerlikaya teaches all the claimed subject matter except for the interchangeable syringes. Wallis teaches the use of simple luer connections to fit standardized syringes.

Claim 36 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornacchia, Yerlikaya, and Wallis as applied to claim 35 above, and further in view of Segal (US 6,402,207)


Cornacchia as modified by Yerlikaya and Wallis teach all the claimed subject matter except for the specific openings for different syringes. However, systems for insuring that fluid containers are not used with an incorrect fluid path are well-known, and illustrated by Segal. It would have been obvious to provide for structure that prevents the use of contrast syringes with the saline injector and vice versa to insure proper operation of the equipment and proper administration of the agents to the patient.

**Contacts**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeremy T. Thissell whose telephone number is (703) 305-5261. The examiner can normally be reached on 8:30-7:00 Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached at (703) 308-3552. The fax phone numbers for all fax communications is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

  
BRIAN L. CASLER  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 3700

jt  
October 30, 2003

